

L 02493-07

ACC NR: AP6032957

of the material was tested on 10 x 10 x 10 mm cubic samples by repeated thermal shock cycles: heating for 5 min at 1400C with subsequent quenching in water at room temperature. The samples withstood 25—30 cycles. Additional shrinking of the samples at 1600C was insignificant. The temperature of the start of deformation under 2 kg/cm² load was 1680—1690C, while the failure temperature was 1690—1700C. An essential disadvantage of the foamed quartz glass is its devitrification at high temperatures. In this connection, the effect of various metallic or nonmetallic oxides used as additives [amounts not specified] was studied. It was found that trivalent ions (boron in particular) inhibit crystallization of the material; the inhibiting effect of quadrivalent ions is less pronounced; quinque- and sexivalent ions produced an insignificant effect. Uni- and divalent ions promote the crystallization. Foamed quartz glass compares favorably with other high temperature insulating materials. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 04Dec65/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS: 5099

awm

Card 2/2

ACC NR: AP6015710

(A)

SOURCE CODE: UR/0073/66/0 2/007/0637/0.32

AUTHOR: Lopato, L. M.; Yaremenko, Z. A.; Iresvyatskiy, S. G.

ORG: Institute of Problems in the Science of Materials AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Interaction between the oxides of rare-earth elements and barium oxide

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 5, 1966, 437-439

TOPIC TAGS: oxide, barium oxide, rare earth, x ray diffraction study, refractive index, strontium compound

ABSTRACT: New compounds are synthesized from BaO and the following rare-earth oxides in the yttrium subgroup: Y_2O_3 , Ho_2O_3 , Er_2O_3 , Tu_2O_3 , Yb_2O_3 and Lu_2O_3 . Some of the physical and chemical properties of the resultant compounds are studied. Microstructural analysis and x-ray powder diagrams are used for phase identification. The new compounds have the following structural formulas: BaY_2O_4 , $BaHo_2O_4$, $BaEr_2O_4$, $BaTu_2O_4$, $BaYb_2O_4$ and $BaLu_2O_4$. The melting points, indices of refraction and birefringence of the compounds are tabulated. The optical properties of the barium compounds differ somewhat from those for compounds with strontium oxide which were studied previously. The indices of refraction for the new compounds lie within the limits of the refractive indices for the initial oxides, whereas the strontium compounds show higher in-

Card 1/2

UDC: 546.65'42

L 32957-65

ACC NR: AP6015740

0
dices of refraction than the initial oxides. Compounds with barium oxide also have low birefringence (0.005-0.01), while the analagous strontium compounds have a birefringence of 0.035. The melting points of the new compounds lie within a range of 1980-2500°, which is somewhat lower than those observed for the strontium compounds. Orig. art. has: 1 figure, 3 tables.

SUB CODE: 07/ SUBM DATE: 12Dec64/ ORIG REF: 002/ OTH REF: 005

Card 2/2 *425*

I. 32047-66 FWT(m)/T/TWP(t)/ETI LJP(c) ID/JG
ACC NR: AP6013347 SOURCE CODE: UR/0363/66/002/004/0679/0682

AUTHOR: Pavlikov, V.N.; Lopato, L.M.; Tresvyatskiy, S.G.

35
B

ORG: Institute of Materials Science Problems, Academy of Sciences UkrSSR (Institut problem materialovedeniya Akademii nauk UkrSSR)

TITLE: Phase transformations of certain rare earth chromites

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 679-682

TOPIC TAGS: chromium compound, phase transition, praseodymium compound, neodymium compound, samarium compound, yttrium compound

ABSTRACT: Phase transformations were studied by differential thermal analysis, dilatometric measurements, high-temperature microscopy, and high-temperature x-ray analysis in binary systems formed by chromium oxide with rare earth oxides TR_2O_3 , where $TR_2O_3 = La_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3$, and Y_2O_3 . $LaCrO_3$ was found to have a reversible endothermic transformation at $290 \pm 5^\circ C$, associated with a change from a rhombic to an orthorhombic structure. This is confirmed by the conservation of anisotropy in the single crystal of the high-temperature form of $LaCrO_3$. The effects associated with the transformation of $LaCrO_3$ are slight. No polymorphic transformations were noted at $20-900^\circ C$ in

Card 1/2

UDC 546.65'763

L 32047-66

ACC NR: AP6013347

praseodymium, neodymium, samarium, and yttrium chromites. However, the possibility of polymorphic transformations at higher temperatures is not excluded. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11, 07 / SUBM DATE: 21Jun65 / ORIG REF: 005 / OTH REF: 006

Card 2/2

L 18055-66 EWT(1)/EWT(m)/ETC(f)/EWG(m)/T/EWP(t)/EWA(h) IJP(c)
ACC NR: AT6006176 JD/JG/GS/AT

SOURCE CODE: UR/0000/65/000/000/0295/0300

AUTHOR: Tresvyatskiy, S. G.; Zyryn, A. V.; Maksimenko, S. A.

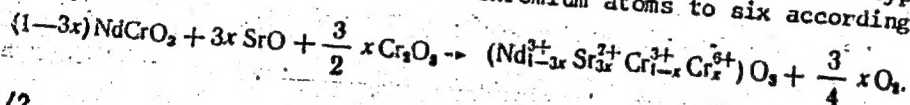
ORG: none

TITLE: Certain electrophysical properties of semiconductors based on oxides of metals with changeable valence 49
B+1
27

SOURCE: Khimicheskaya svyaz' v poluprovodnikakh i tverdykh telakh (Chemical bond in semiconductors and solids). Minsk, Nauka i tekhnika, 1965, 295-300

TOPIC TAGS: semiconductor, rare earth element, thermoelectric property, lanthanum compound, neodymium compound, chromium compound, thermal emf

ABSTRACT: The temperature dependence of the coefficient of thermoelectric force (α , in microvolts/degree) was measured for a series of strontium and calcium doped lanthanum and neodymium chromites. The doping of these Perovskite-type chromites raises the valence of a portion of the chromium atoms to six according to the scheme:



Card 1/2

L 18055-66
ACC NR: AT6006176

where $x \leq 0.05$. This is reflected in a hole-type semiconductivity in the doped chromites. The electrical conductivity of the chromite samples was measured potentiometrically by a 500 kc volt-ammeter using alternating current. For each sample, the temperature (400-1000°K) and the potential difference (which is proportional to the logarithm of sample's electrical conductivity) were recorded simultaneously. The coefficient of thermal emf (α) was calculated using the temperature difference between two ends of the sample. The temperature dependence of the thermal emf coefficient, temperature dependence of specific electric resistivity, and the dependence of α on the temperature logarithm are graphed for several doped chromites. Orig. art. has: 3 figures, 3 formulas.

SUB CODE: 20 SUBM DATE: 31May65/ ORIG REF: 001/ OTH REF: 003

Card 2/2 *SHV*

TRESVYATSKIY, S.G.; YAREMENKO, Z.A.; LOPATO, L.M.; SOKOLOVSKIY, V.A.;
KARPENKO, V.Ya.

Some physicochemical properties of synthetic periclase single
crystals. Izv. AN SSSR. Neorg. mat. 1 no.11:1878-1882
N '65. (MIRA 18:12)

1. Institut problem materialovedeniya AN UkrSSR. Submitted
April 24, 1965.

SHEVCHENKO, A.V.; LOPATO, L.M.; TRESVYATSKIY, S.G.

Synthesis and some physicochemical properties of the single
crystals of rare-earth chromites. Izv. AN SSSR. Neorg. mat.
1 no.11:1945-1948 N '65. (MIRA 18:12)

1. Institut problem materialovedeniya AN UkrSSR. Submitted
June 21, 1965.

P.T.A. TRESZCZANOWICZ *Chemistry & Chemical Technology*
E. 7

332

542.943.7 : 547.652.1.09 : 547.639.1.07

Treszczanowicz E. and Ciborowski S. Purification and Hydrogenation of Naphthalene to Tetralin.

„Oczyszczanie i uwodornianie naftalenu do tetraliny”. *Przemysł Chemiczny*. No 2—3, 1950, pp. 132—134, 4 tabs.

A method has been elaborated for purification of naphthalene by way of heating with fused sodium. The hydrogenation process was observed in a rotating autoclave in the presence of two different catalysts. The influence of various factors, such as: the degree of hydrogen and naphthalene purity, the temperature of the reaction, the pressure, the quality of the catalyst and its amount and size of grain were examined with regard to the above process.

TRESVYATSKIY, S.G.; LOPATO. L.M.

Factors determining the type of constitutional diagram for binary
systems formed by refractory oxides. Porosh.met. 4 no.5:35-40
S-O '64. (MIRA 18:10)

1. Institut problem materialovedeniya AN UkrSSR.

L 7693-66 EWT(1)/EWT(m)/T/EWT(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG
 ACC NR: AP5028724 SOURCE CODE: UR/0363/65/001/011/1945/1948

AUTHOR: Sheychenko, A. V.; Lopato, L. M.; Tresvyatskiy, S. G. ⁵⁵
_{44 55 44 55 44 55}

ORG: Institute of Problems of the Study of Materials, Academy of Sciences, UkrSSR
 (Institut problem materialovedeniya Akademii nauk UkrSSR) _{44 55}

TITLE: Synthesis and some physicochemical properties of single crystals of rare earth chromites

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965, 1945-1948

TOPIC TAGS: single crystal, rare earth element, chromium compound, ^{21, 44 55} single crystal growth, crystal property, crystal structure, crystallization, fluxed melt, rare earth element chromite

ABSTRACT: Growing single crystals of rare-earth element chromites from fluxed melts has been studied because of the earlier reported unsuccessful attempts to obtain the single crystals by this technique. The authors also intended to study certain physicochemical properties of these single crystals and to solve the problem of the existence of garnet-type structure in the R_2O_3 - Cr_2O_3 systems. Experiments are described, in which PbO and PbF_2 , PbO and B_2O_3 mixtures, and Bi_2O_3 were used as solvents (fluxes) for the powdered chromite which was synthesized from pure rare earths and chromium nitrate. The R_2O_3/Cr_2O_3 ratio in the starting mixture, the oxides/solvent

Card 1/2 UDC: 546.65'763:548.55 _{55, 47 27} _{5901 2107}

L 7693-66

ACC NR: AP5028724

ratio, and temperature of dissolution were the main variables of the growth process. Exclusive formation of single crystals of the thirteen rare-earth element chromites of the perovskite-type structure was established only in the $\text{PbO} + \text{PbF}_2$ fluxed melt under optimized conditions. The perovskite structure was obtained regardless of whether the $\text{R}_2\text{O}_3/\text{Cr}_2\text{O}_3$ ratio corresponded to the stoichiometric composition of perovskite or garnet. At a maximum temperature of dissolution above the optimum (1360C) in the $\text{PbO} + \text{PbF}_2$ fluxed melt, in $\text{PbO} + \text{B}_2\text{O}_3$ and in Bi_2O_3 fluxed melts, formation of chromium oxide single crystals was observed in addition to that of perovskite. The single crystals of the rare-earth element chromites had 2 x 2 x 2 mm maximum dimensions. IR spectra, x-ray and petrographic analysis of the crystals indicated that the rare-earth element chromites begin to dissociate at over 2100C in argon and that thermal dissociation increases with decreasing ionic radius of the rare earth element. Orig. art. has: 2 tables and 2 figures. [JK]

SUB CODE: SS/ SUBM DATE: 21Jun65/ ORIG REF: 004/ OTH REF: 006/ ATD PRESS;

Card

2/2

TRESVIATSKIY, S.G. [Tresviats'kyl, S.H.]; NAZARENKO, N.D.; DUBOK, V.A.;
NECHITAYLO, V.F. [Nechytailo, V.F.]

Synthesis and properties of magnesium oxide whisker crystals. Ukr. fiz.
zhur. 10 no.6:676-681 Je '65. (MIRA 18:7)

1. Institut problem metallovedeniya AN UkrSSR, Kiyev.

L 32087-65
ACCESSION NR: AP5014072

5
in the system $(KF)_2$ -MgO-SiO₂-Al₂O₃ were also studied. The preparation of crystalline micaceous materials of finely crystalline structure cast from molten potassium phlogopite is described, and certain physicomechanical, thermophysical, and other properties of these materials were investigated and are tabulated. In

were investigated:
... ..

has: 4 figures and 5 tables.

ACCESSION: Institut problem materialovedeniya Akademii nauk Ukrainiskoy SSR
... ..

SUBMITTED: 09Oct64

ENCLOSURE

NO REF SOV: 009

OTHER: 001

me
Card 2/2

L 54736-65 EWG(j)/ENT(m)/EWP(w)/EPF(c)/EWA(d)/EPR/T/EWP(t)/EPF(b)/EWA(i)

Pr-4/Pr-4 IJP(c) JD

ACCESSION NR: AFS015444

UR/0185/65/010/006/0676/0681

AUTHOR: Tresvyats'kyy, S. H. (Tresvyatskiy, S. G.); Nazarenko, N. D.; Dubok, V. A.;
Nechytaylo, V. P. (Nechitarlo, V. P.)

TITLE: Production and properties of magnesium oxide whiskers¹

SOURCE: Ukrains'kyy fizychnyy zhurnal, v. 10, no. 6, 1965, 676-681

TOPIC TAGS: magnesium oxide, magnesium oxide whisker, whisker growing, whisker growing method, whisker property, whisker tensile strength

ABSTRACT: A method and equipment for growing magnesium oxide whiskers from the

Card 1/2

L 54736-65

ACCESSION NR: AP5015444

spectral analysis. Tensile tests showed that with decreasing diameter the tensile strength of the whiskers drops. The majority of the MgO whiskers with a diameter less than 1 μ m had a tensile strength of 1.5-2.5 kg/mm². This art. has 7 figures. [MS]

ASSOCIATION: ...

NO REF SOV: 005

OTHER: 005

ATD PRESS: 4030

Card 2/2

L 38630-66

ACC NR: AP6008801

basaltic or hexagonal plates. X-ray structural analysis showed that cesium and rubidium synthetic micas belong to the group of synthetic fluoromicas of the phlogopite type. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: 08Sep64/ ORIG REF: 002/ OTH REF: 001

Card 2/2 SYN

5 1190

2209

23308

5/14/66/0040/001/004/007
ABG/A.L.G.

AUTHORS: Jellot, Winold; Papowicz, Marjary; Baitersak, Kazimierz and
Zmrozowski, Edward

TITLE: Investigations on obtaining xylates by alkylation of toluene with
methanol in the presence of phosphoric acid on kieselguhr - as carrier

PERIODICAL: Przemysl Chemiczny, v. 40, no. 1, 1961, 29-31

TEXT: The research on obtaining xylates by alkylation of toluene with
methanol in presence of phosphoric acid as catalyst, was undertaken in view of
the expected shortage of xylene in Poland in and after 1965, when production
of polyester fibers will commence. On the other hand, substantial surplus of
toluene and methanol is expected at the same time. Work of similar character was
carried out in America with promising results. In order to establish optimum
conditions under which the synthesis of xylates can be carried out, various
parameters of alkylation were investigated separately, with the following results:
Influence of pressure: there was no alkylation of benzene ring at atmospheric
pressure and 340 - 380 °C in presence of orthophosphoric acid on kieselguhr as
carrier; better results were obtained by using aluminum silica as catalyst.

Card 1/4

23308

12/4/61/040/001/004/007
A22/A.26

Investigations on obtaining oxides . . .

carrier. Eventual application of higher pressure (36 atm) solved the problem and at the same time stopped the dehydration of the catalyst which was observed at atmospheric pressure. Influence of partial steam pressure: certain partial pressure of steam in the reactor is useful for maintaining the activity of the orthophosphoric catalyst. Partial pressure of 6-8 atm was found to be satisfactory, and about 5% of water in proportion to applied mixture had to be added to the reactor. Influence of the mixture composition: on the basis of experience gained the molar ratio 4:1 of toluene and methanol was maintained during most of the tests. Such a mixture secured higher yield of oxides and less yield of methyl benzenes. Influence of reaction temperature: it was ascertained that optimum alkylation of toluene takes place at a temperature about 20°C lower than that at benzene alkylation. It has been observed that at a temperature above 360°C decomposition of methanol, and consequently carbon (soot) sealing of the catalyst takes place. Influence of catalyst on the reacting mixture ratio: After some experiments, the ratio of 0.25 lit per liter of catalyst was found to be most suitable. Influence of catalyst carrier: kieselguhr, siliceous earth and silica gels. The most difficult part of the investigation was connected with preparation of a catalyst of good catalytic activity and mechanical strength. Phosphoric acid adsorbed on kieselguhr or siliceous earth with an alkoxide treatment,

Card 2/4

23308

P/14/61/040/001/004/007

A221/A126

Investigations on obtaining xylenes ...

ZnO, TiO_2 was not very active and was losing its activity rapidly. This was partly due to chemical combining of phosphoric acid with aluminum and the leaching effect of water. Catalyst made on kieselguhr carrier washed with hot water, lost 50% of P_2O_5 within 12 hours. Accumulation of soot on the catalyst, too, was responsible for loss of activity. Catalyst prepared on silica gel was much superior and after 300 hours still maintained 70-75% of its original activity. As the reaction was carried out at a temperature 10 - 20°C lower than that with kieselguhr catalyst, less carbon settling on the catalyst was observed. The composition of xylenes thus obtained was: 52% of o-xylene, 22% of m-xylene and 26% of p-xylene. Influence of inert two-skeleton carbon catalyst carrier: Following the experience of some Soviet scientists the authors prepared the so-called two-skeleton catalyst carriers: Activated charcoal was soaked in sodium silicate, and SiO_2 in its pores precipitated by means of sulfuric acid. After washing and drying, the carrier was soaked in 40% ortho-phosphoric acid and dried out at 320-340°C. The catalyst thus prepared contained 30% of activated charcoal, 4% SiO_2 and 66% of pyrophosphoric acid ($\text{H}_4\text{P}_2\text{O}_7$). This two-skeleton catalyst mass proved to be more active and durable than those previously described. Its activity remained practically unchanged after a 300-hour test and from the original 66% it retained 50% of orthophosphoric acid. The xylene to poly-methyl toluene ratio

Card 3/4

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F/44/61/040/001/004/007

A221/A126

Investigations on obtaining xylenes ...

in the crude product was 2:1 with around 27% of p-xylene in it. On the basis of this laboratory work a semi-technical installation was put into operation and the above-mentioned findings were confirmed. There are 2 figures, and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc. The reference to the most recent English-language-publication reads as follows: Pat. amer. 2756261(1956).

ASSOCIATION: Zakład Syntezy Kontaktowej Instytutu Chemii Ogólnej (General Chemistry Institute, Contact Synthesis Department) in Warsaw.

SUBMITTED: August 9, 1960

Card 4/4

P.I.A.

Chemistry + Chemical Technology

719

517.233.2 - 212.07

Treszczanowicz E. Jaworska I. Synthesis of Diethylamine from Acetic Aldehyde, Hydrogen and Ammonia.

"Synteza dwuetylaminy z aldehydu octowego, amoniaku i wodoru", Przemysl Chemiczny, No. 11, 1950, pp. 680-689, 5 figs., 6 tabs.

Comparative tests of preparing diethylamine from acetic aldehyde, hydrogen and ammonia under atmospheric pressure are described. The synthesis is carried out by continuous method in the presence of two catalysts: $\text{Ni/Al}_2\text{O}_3$ in pieces and $\text{Ni/Cr}_2\text{O}_3$ adsorbed on pumice. The overall synthetic reaction was examined. The effect of the following factors upon the reaction was investigated: 1) temperature (170-200°), 2) rate of the substrate flow (time of contact being 0.5-6 sec.), 3) the ammonia excess in substrate, 4) application of silica gel (from technical water glass purified by means of an

"ionite") as the agent to facilitate the catalyst deposition on pumice. A stability test, covering 200 hours, of $\text{Ni/Al}_2\text{O}_3$ catalyst was made.

6

PJA

1168 542.943.7 : 546.77/78—31.09 : 547.533
Treszczanowicz E., Ciborowski S., Wesolowski J., Nlaczynski M., Ko-
chanowicz W. Catalytic Oxidation of Toluene.

„Kontaktowe utlenianie toluenu”. Przemysl Chemiczny. No. 4.
1951. pp. 246—250. 3 figs. 1 tab.

Catalytic oxidation of toluene with atmospheric oxygen in
gaseous phase gives 5% of benzoic acid; 39% benzaldehyde and 36%
maleic acid in relation to the mole fraction of toluene used. The
conversion was 80%. Vanadium and molybdenum oxides on
electrocorundum of Polish production were used as catalysts.

POPOWICZ, Marian; CELLER, Witold; TRESZCZANOWICZ, Edward; ROMANOWSKI,
Wladyslaw

Studies on the influence of certain conditions in the
preparation of nickel catalysts on their structures, activity
and catalytic stability. Przem chem 42 no.10:563-566 C'63.

1. Zaklad Syntezy Kontaktowej, Instytut Chemii Ogolnej,
Warszawa i Katedra Chemii Nieorganicznej I, Politechnika,
Wroclaw.

S/081/63/000/002/060/088
B162/B102

AUTHORS: Treszozanowicz, Edward, Orzelczyk, Stanisław

TITLE: Method of isomerization and carboxylation of carboxylic acids in the presence of zinc cadmium catalyzers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 408, abstract 2N59 (Pol. patent 44701, Aug. 2, 1961)

TEXT: Aromatic carboxylic acids are isomerized or carboxylized in the presence of catalyzers (CT) from alloys of Zn-Cd or composite oxides of CT, obtained from these alloys by being heated in air. This method makes it possible to lower the temperature of the process and to increase the yield of the product. The CT are prepared by alloying Zn and Cd in the form of metals or their compounds. The alloy is cooled and ground down. It is more advantageous to use composite CT, obtained from calcining the granules (diam. 4 - 5 mm) of Zn-Cd alloy in air at $\sim 500^{\circ}\text{C}$. The regeneration of CT is carried out by calcining in an oxidizing atmosphere. For instance, 242 g of $\text{o}-(\text{KOOCC})_2\text{C}_6\text{H}_4$, containing 5% of Zn-Cd alloy in powder form, in which there is $\sim 40\%$ of Cd, is heated for 2 hours at 400°C under CO_2 pressure of

Card 1/2

Method of isomerization and...

S/081/63/000/002/060/088
B162/B102

5 atmospheres. From the reaction product, 124 g (75%) of $n\text{-(HOOC)}_2\text{C}_6\text{H}_4$ (I) is liberated. 12.1 g of the alloy Zn-Cd, in powder form, containing 35% of Cd, is calcinated for 3 hours in air at 550°C, mixed with 242 g of $n\text{-(KOOCC)}_2\text{C}_6\text{H}_4$ and heated for 2 hours at 400°C under CO_2 pressure of 5 atmospheres. The product contains 131 g of I. The yield of I is 79%. By carboxylation of $\text{C}_6\text{H}_5\text{COOK}$ with the same CT, I is obtained with a yield of ~75%. [Abstracter's note: Complete translation.]

Card 2/2

TRZSZCZANOWICZ, Edward

Main trends of the work of the Institute of General Chemistry
in catalysis. Przem chem 42 no.12:684-691 D'63.

OTWINOWSKA, Hanna; TRESZCZANOWICZ, Edward; CIBOROWSKI, Stanislaw

Studies on electric conductivity and catalytic activity of
promoted zinc oxide during isopropanol dehydrogenation.
Rocz Chemii 37 no. 7/8:863-869 '63.

1. Institute of General Chemistry, Warsaw.

SZNAJDER, Jerzy; TRESZCZANOWICZ, Edward; CZERWINSKA, Barbara;
CHOJNACKI, Rajmund

Influence of methods of preparing catalysts aluminum silicium
on their protonic activity in the process of xylene polymerization.
Pt.2. Gels precipitated successively and precipitated jointly.
Przem chem 41 no.8:454-457 Ag '62.

1. Zaklad Syntezy Kontaktowej, Instytutu Chemii Ogolnej,
Warszawa.

TRESZCZANOWICZ, E.; SZNAJDER, J.

Second International Catalysis Congress. Przem chem 40
no.7:404-409 J1 '61.

1. Instytut Chemii Ogólnej, Warszawa.

TRESZCZANOWICZ, E.

Distr: 422c(3)1

A long-life catalyst for the synthesis of acetone from ethyl alcohol. St. Grzelczyk, I. Jarowska, Z. Kohman, J. Sznajder, and E. Treszczanowicz. *Przemysl Chem.* 34, 28-33 (1955) (English summary).—A catalyst of an activity period of 500 hrs., consisting of Fe_2O_3 , Cr_2O_3 , and CaCO_3 , CuO as activator, was prepd.; 84% (on wt.) of Fe_2O_3 , Cr_2O_3 (as used for the conversion of CO and H_2O into CO_2 and H_2) obtained by the pptn., with AmOH , 38% of a pptd. CaCO_3 , and 8% pptd. CuO, were thoroughly mixed, and pressed into pellets. This catalyst was tested in an app. described in detail. As reaction chamber an electrically heated pipe 60 mm. diam., vol. 1/1. was used. EtOH was supplied as vapor at a temp. of 200° . The reaction products (acetone, H_2O , AcH 0.6%, and AcOH 0.62%) were condensed, and the gases washed with H_2O . The feed was 810 ml. EtOH (20% by vol.)/l. catalyst/hr., temp. of the reaction $400-440^\circ$. Although the best results (up to 85% yield) were obtained using 20% EtOH soln., it is advantageous to use a 30% soln. due to an increase of the amt. of produced acetone. The regeneration of the catalyst was accomplished every 500 hrs. by passing through it a mixt. of steam (1.6 kg./l. catalyst/hr.) and air (100-150 l./l. catalyst/hr.), and then air alone during 1 hr. Results on a semiindustrial scale. E. Treszczanowicz, A. Filc, St. Grzelczyk, A. Szpyrkowicz, Z. Kohman, and J. Sznajder. *Ibid.* 38-33. The results of lab. expts. were confirmed. The catalyst pellets used were 8 mm. diam., 6-8 mm. high. The temp. of the pipes contg. the catalyst was $380-420^\circ$. The supply of alc. (20% by vol.)/l. catalyst/hr. was 750 ml. The regeneration of the catalyst was accomplished every 500 hrs. (temp. 420°). The yield was 75-85%, exceeding from time to time 90%. L. G. Manders

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Dist: 4E2c, 124 4E3d
~~Carbon tetrachloride obtained by noncatalytic chlorination of methane.~~ H. Stegner, K. Marczewicz, and B. Trepczanowicz. *Przemysł Chem.* 34, 29-32 (1955) (English summary).—The conditions of continuous production of CCl_4 were established. The app. (described in detail) consisted of (1) a steel reactor lined with bentonite, (2) and HCl absorption tower filled with broken glass, continuously rinsed with 10% NaOH ; at the bottom of it a heated iron bottle to prevent condensation in the tower; (3) a cooling tower, (4) a receiver; (5) a H_2O absorber (95% H_2SO_4) in form of a glass tower; (6) a circulating pump, (7) a gas meter, (8) added Cl meter; (9) feeder of 1:1 CH_2Cl_2 and CHCl_3 ; (10) a gas mixer connected with 1 to close the circuit. Additionally, before the pump, fresh CH_4 was supplied. The reaction temp. was $420-440^\circ$, cooling tower $7-10^\circ$; the amt. of Cl in respect to the gases was 1:5 to 1:8. The yield of CCl_4 was up to 85% (vol.). It is important to use as the supplementary feeding a mixt. of CH_2Cl_2 and CHCl_3 , or CH_2Cl_2 alone, but not CHCl_3 alone. L. G. Manilius

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Qla *g-f*

TREZZLE NEW

Distr: 4E3d/4E2c(j)

27
Copper catalyst Raney type in the dehydrogenation of cyclohexanol to cyclohexanone. L. Kohmanowa and E. Treszcianowicz. *Przemysl Chemic.* 34, 42-5 (1955) (English summary).—A 1:1 Cu-Al catalyst was prepd., and its action compared with that of Zn-Fe. The Cu (electrolytic) and Al (99.95%) were melted in an O-free oven, and 2 catalysts were prepd.: (a) by breaking into grains 3-4 mm. diam.; etching with NaOH (25%), washing with H₂O to eliminate OH⁻, and storing in EtOH; (b) powdering, etching with NaOH (25%), washing, and drying. Both were heated to 280-300° in H₂ (10 l./hr./25 ml. catalyst) during 8 hrs., before being used. The above catalysts were compared with (c) Zn-Fe. The amt. of reacted cyclohexanol was in each case 4 l./hr./l. catalyst. The activation energy was (cal./mol.): (a) 7700, (b) 14,603, (c) 35-45,000. The yield of cyclohexanone was: (a) 90% at 260°, (b) 97% at 260°. The Cu-Al catalysts were not contaminated after 50 hrs. L. G. Manltjus

SB
VI

6
2 May
2

TRFSZCZANOWICZ, E.; LLPKA, B.; JUREWICZ, A.

Studies on zinc⁶-ferrum alloy contacts in the reaction of dehydrogenation of cyclohexanol to cyclohexanone; relationship between catalytic properties and their potentiometric characteristic. p. 319

CHEMIA STOSOWANA (Polska Akademia Nauk) Wroclaw, Poland. Vol. 2, no. 3, 1958

Monthly List of East European Accessions. (EEAI) LC, Vol. 8, no. 9, September 1959.
Uncl.

TRESZCZANOWICZ, EDWARD

Distr: LE3d/LE2c(j)

Phosphate catalyst activity. I. Influence of metal oxide admixtures on catalyst activity in alkylation of benzene with methanol. Leszek Grzelewski, Marian Popowicz, and Edward Treszczanowicz (Inst. Chem. Ogóln., Warsaw). *Chem. Sposobami* 7, 233-38 (1958) (English summary). —A catalyst (I), contg. P_2O_5 64, kieselguhr 26.5, ZnO 6.5, and bentonite 3% was used for vapor-phase alkylation of benzene (II) with $MeOH$. I was prepd. by treating kieselguhr, ZnO , and bentonite, mixed in the above ratio, with 85% H_3PO_4 , drying at $200-20^\circ$, and crushing (grain size 5-10 mm.). To avoid soot formation 5% H_2O was added to II- $MeOH$ mixt. of 2:1 mol. ratio. Contact times were 20 or 25 min. V_2O_5 (2), WO_3 (2), or TiO_2 (1-4%) added to I, increased its activity effectively. CaO (5%) decreased it strongly. Fe_2O_3 (1-4) and Cr_2O_3 (4% with respect to I) had no effect. ZnO and bentonite were also found to improve the activity of I. II. The influence of ignition on catalyst activity. Tentative regeneration. *Ibid.* 239-45 (English summary). —I, and I + 2% TiO_2 were regenerated by 10-hr. ignition at 800° ; a German catalyst (III) contg. P_2O_5 45%, and poisoned by carbon deposit (40%), was regenerated over 10 hrs. by passing in air, 80 l./hr., at 600° and 800° . Under the conditions the activity of I and TiO_2 was completely restored after 20 and 100 min., resp., that of III only partially; apparently C was not the only poison. Hardness and compressive strength of I and TiO_2 regenerated were good. Ignition up to 900° and above reduced activity by recrystn. and deformation processes. A. Szafranski

8
3 May
2

Treszczanowicz, E.

B-9

POLAND/Physical Chemistry - Kinetics. Combustion.
Explosions. Topochemistry. Catalysis.

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30578

Author: Grzelewski, L., Popowicz, M., Treszczanowicz, E.

Inst:

: Not given

Title:

Studies of the Reactivity of Phosphate Contact
Catalysts. I. Effect of the Addition of Metal
Oxides on the Reactivity of the Catalysts in
the Alkylation of Benzene with Methanol. II.
Effect of Sintering of the Catalysts on Their
Reactivity in the Alkylation of Benzene by
Methanol.

Orig Pub: Chem Stosow, 1958, No 2, 233-238, 239-245

Abstract: I. The reactivity of phosphate catalysts (PC)
containing 64% P₂O₅, 6.5% ZnO, 26.5% kieselguhr,

32

Card 1/3

POLAND/Physical Chemistry - Kinetics, Combustion.
Explosions. Topochemistry; Catalysis.

B-9

Abs Jour: Referat Zhur i Khim, No 9, 1959, 30578

and 3% bentonite has been investigated in the alkylation of C_6H_6 with methanol as a function of the addition of oxides of Ca, Fe, Cr, Ti, V, and W. The addition of 5% CaO reduces the activity of the PC by a factor of 2; the addition of 4% Fe_2O_3 or Cr_2O_3 has practically no effect on the reactivity; and the addition of 2% V_2O_5 or WO_3 or of 1% TiO_2 increases the yield of alkylated products by a factor of more than 1.5. The reactivity of the PC is lowered by the presence of bentonite or ZnO . II. When the PC are sintered at $200-900^\circ$, their reactivity is little affected, the yield of alkylated products varying between 14.0 and 11.2%. Sintering at 1000° reduces the yield of alkylated products to 4.3%. The regeneration of the spent PC by burning out the carbon at $600-800^\circ$ restores the

Card 2/3

POLAND/Physical Chemistry - Kinetics. Combustion. B-9
Explosions. Topochemistry. Catalysis.

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30578

reactivity of the catalysts to no more than
one-half its former value. -- S. Kiperman

Card 3/3

33

TRESZCZAKOWICZ, Edward

Production of terephthalic acid and the possibilities of starting it in Poland. Przem chem 39 no.3:137-141 Mr '60.

1. Zaklad Syntezy Kontaktowej, Instytut Chemii Ogolnej, Warszawa

COUNTRY : POLAND
 CATEGORY : Physical Chemistry, Kinetics, Combustion,
 Explosions, Topochemistry, Catalysis
 RES. JOUR. : RZhKhim., No 17, 1959, No. 60095
 AUTHOR : Trusovskiy, E. I., E. I. Zhurav
 INSTITUTE :
 TITLE : The Investigation of Zinc-Iron Contacts in the
 Hydration Reaction of Cyclohexanol. Correla-
 ORIG. PUB. : Chem. Abstr., 1960, Vol. 54, 311-323

ABSTRACT : Investigated are activities of a number of
 Zn - Fe contacts (having different compositi-
 ons) with regard to dehydration of cyclohexanol
 to cyclohexanone. The activity of contacts de-
 pends on their composition and on the method of
 preparation. Two contacts, having an identical
 composition (10.5 and 12.8% Fe), but characte-
 rized by differences in structure, resulting
 from different catalytic properties. One of

*tion Between the Catalytic Properties of Con-
 tacts and Their Potentiometric Characteristics.

Card: 1/2

B-16

COUNTRY :
CATEGORY :

B

ABS. JOUR. : RZhKhim., No 17, 1959, No. 50095

AUTHOR :
INSTITUTE :
TITLE :

ORIG. PUB. :

ABSTRACT : the contacts, obtained in slow cooling of the
Con'd Zn - Fe melt, has a stable catalytic activity.
The electrode potential of a sample prepared
from powder derived from this contact, has a
very specific value(-790 mv). Other contacts,
characterized by large absolute values of the
electrode potential, although are higher in
catalyst activities, the latter is unstable.
The authors point to the importance of poten-
tiometric investigation of catalysts.--V. Prolov.

Card: 2/2

RESTCZANOWICZ, E.

reports to be presented at the 2nd Intl Congress on Catalysis, Paris, France, 6-9 Jul '60.

Revised

MANNING, B., SULLOCH, K., and SCHLASSER, J. "Properties of nickel layers electrochemically hydrogenated in the presence of sodium" (Section II)
 MANNING, B., SULLOCH, K., HANEY, J., and SCHLASSER, J. "Catalytic processes accompanying the electrochemical hydrogenation of alcohols on semiconducting oxide catalysts" (Section II)
 MANNING, B. "On the process of catalytic reaction of sulfur dioxide with acids in iron sulfate solution" (Section II)
 MANNING, B. "On trace catalysts" (Section II)
 LUTER, R., MANNING, B., and SCHLASSER, J. "The gas-phase transformation of a mixture of 3-pyridone and 4-pyridone in the presence of sodium and air in a mixture of carbon dioxide and nitrogen" (Section II)
 MANNING, B., and MANNING, T. "Hydrogen transfer in gaseous phase between alcohols and compounds containing carbonyl groups" (Section I)
 OGDEN, R., MANNING, B., and SCHLASSER, J. "Effect of electric conductivity and catalytic activity of promoted zinc oxide during isopropanol dehydrogenation" (Section III)
 SULLOCH, K. "Study of selectivity and activity of copper catalysts in dehydrogenation reaction" (Section II)
 MANNING, B., and SCHLASSER, J. "Influence of dimensions of pores on the catalytic power of active carbon in the oxidation of sulfur hydrogen by oxygen" (Section II)

TRESCZANOWICZ, E.

reports to be presented at the 2nd Intl Congress on Catalysis, Paris, France, 4-9-Jul '60

Poland

MAKOWSKI, B., SZALONSKI, M., and SZALONSKI-
KALONSKA, Z. - "Properties of nickel layers
electrolytically hydrogenated in the presence
of poisons" (Section II)
SZALONSKI, A., WEISS, J., KAZI, J., and
SZALONSKI, J. - "Electronic processes
accompanying the catalytic dehydrogenation
of alcohols on semiconducting oxide catalysts"
(Section II)
SZALONSKI, J. - "On the process of catalytic
reaction of sulfur dioxide with acids in iron
sulfate solution" (Section III)
SZALONSKI, A., SZALONSKI, M., and SZALONSKI-
KALONSKA, Z. - "Catalytic activity of nickel
layers on semiconducting oxide catalysts"
The authors have transformed a mixture
of isopropyl and isopentyl in the presence
of ammonia and air in a mixture of corresponding
nitrites" (Section III)
MAKOWSKI, B., and KUBIATOWSKI, Z. - "Hydrogen
transfer in aqueous phase between alcohols
and compounds containing carbonyl groups"
(Section I)
SZALONSKI, A., SZALONSKI, M., and
SZALONSKI, K. - "Studies on electric
conductivity and catalytic activity of
promoted zinc oxide during isopropanol
dehydrogenation" (Section III)
SZALONSKI, J. - "Study of selectivity and activity
of copper catalysts in dehydrogenation
of alcohols" (Section II)
SZALONSKI, A., and SZALONSKI, J. - "Influence
of dimensions of pores on the catalytic power
of active carbon in the oxidation of sulfur
hydrogen by oxygen" (Section II)

Treszczanowicz, E.

5811

640.171.1:547.821.4

Lipka B., Treszczanowicz E., Jaworska I., Jurawicz A. The Study of the Contact Oxidation with Air in the Presence of Ammonia of a 3- and 4-Picoline Mixture.

„Badania nad kontaktowym utlenianiem mieszaniny 3- i 4-pikoliny, powietrzem w obecności amoniaku”. Przemysł Chemiczny. No. 7, 1958, pp. 484—489, 3 figs., 5 tabs.

This paper deals with the preliminary examination of the process of contact oxidation of a 3- and 4-picoline mixture with air in the presence of ammonia. The reaction was carried out in gaseous phase over a contact of vanadium oxides on alumina carrier. The product obtained was a mixture of nitriles of nicotinic and isonicotinic acids. The yield of nitriles at 330—360° was about 63% of the theoretical in relation to the picolines introduced, and 90% to the picolines which entered into reaction. Only 6.0% of the picolines introduced suffered oxidation with decomposition.

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27/10/58

JS

POLAND / Physical Chemistry. Kinetics. Combustion. Explosions. Topochemistry. Catalysis. B

Abs Jour: Ref Zhur-Khimiya, 1958, No 24, 80778.

Author : Treszczanowicz E.

Inst : ~~Not~~ given.

Title : Study of Catalytic Activity of Zn-Fe Alloys in the Dehydrogenation of Cyclohexanol and of Cyclohexane. I. Effect of Cooling Method on the Structure and on the Catalyst Activity.

Orig Pub: Przem. chem., 1957, 13, No 8, 445-449.

Abstract: Effect of cooling method employed in the preparation of Zn-Fe alloys (containing approx. 12.5% Fe) on its structure and on its activity as a catalyst for the dehydrogenation of cyclohexanol is shown. A stable and active compound is obtained as the result of slow cooling. The

Card 1/2

26

POLAND / Physical Chemistry. Kinetics. Combustion.
Explosions. Topochemistry. Catalysis.

B

Abs Jour: Ref Zhur-Khimiya, No 24, 1958, 80778.

Abstract: energy of activation of dehydrogenation, E,
in the presence of this compound constitutes
41.3 K cal/mol. Conversely, alloys of the
same composition, that were cooled rapidly,
possess low activity stabilities. Their E
change in the course of reaction.

Card 2/2

POLAND / Chemical Technology. Chemical Products and Their Application. Industrial Organic Synthesis.

Abstr. Four: Ref. Zhur-Khaila, Mo S. 1939, 3233A.

Author: Marozewski, K.; Musierowicz, J.; Stogor, E.

Title: Not given.

Source: Acetone from Acetylene and Water Vapor. I.

Orig. Pub: Prom. chem., 1937, 13, No 7, 405-410.

Abstract: After a brief review of the methods of obtaining acetone, there were submitted the results of a study of the process for obtaining acetone from acetylene (I) and water vapor (WV), a more suitable method for Poland's conditions. In a semi-industrial setup, 98% of I was purified from AsH_3 , PH_3 and H_2S (from a total amount of admixtures, 800-1000 mg./m.³ to 60 mg./m.³) by 40% HNO_3 in a

Card 1/3

Abstract: sprayer and then was passed successively through 3 purifiers. The mixture of the purified I with superheated WV (110, 5000) was admitted into a reactor (6 vertical tubes, about 50 mm. in diameter and 1.2 mm. in length) with a catalyst (O) submerged in a water bath with a dissolved mixture of salts (40% KNO_3 ; 5% KNO_2 ; 5% $NaNO_3$ at 480° and then was admitted into a cooling system consisting of coil pipes and a scrubber. The experimental layout differed from the semi-industrial system of the dry purification of I by the "Ceritol" mass and activated carbon. An impenetrable and activated O was prepared from 3 parts of ZnO and one part of the mass, used for

Card 2/3

Abstract: the O conversion of the water vapor, with the addition of 4% Br_2 , thereby increasing its activity. O in the form of cakes, 5 x 5 mm. and 2 x 2 mm. were used. The O was activated at 480-490° by air (A) and WV (one hour, 200 l. of A per one l. of O in one hour; two hours, 150 l. of A per one l. of O in one hour; and 100 l. of A per one l. of O in one hour). The O regeneration was accomplished by blowing with WV and A at 480-500° in 6-7 hours; at the end only 100-300 l. of A per one l. of O in one hour were used. Diagrams of the process and the reactor are submitted. — I. Matveyeva.

Card 3/3

POLAND / Chemical Technology. Chemical Products and Their Application. Industrial Organic Synthesis.

Abstr Jour: Ref Zhim-Tekhnol, No 9, 1959, 52340.

Author: Balczerek, K., Geller, W., Glibkowski, St., Grolowski, L., Maczankowski, O., Popowicz, M., Trzaskanowski, M.

Inst: Not given.

Title: From the Investigatory Works in the Synthesis of Methyl Benzene.

Orig Pub: Pres. chem., 1957, 15, No 6, 546-550.

Abstract: During the study of the effects of different conditions on the catalytic reaction of the methylation of C_6H_6 by means of CH_3OH in the presence of catalysts (C) containing P_2O_5 , it was discovered that the most favorable conditions are:

Card 1/3

Abstract: 340°; about 35 atm; the molecular proportion, $C_6H_6:CH_3OH = 4:1$; the speed of delivery, 1.25 l. an hour per one l. of C in one hour. The unpurified product consists of methyl benzene, about 17% (by volume), ethyl benzene, about 17% (by volume), and a mixture of toluene, xylene and ethyl benzene (50% of them n-xylene) and 20% compounds of C_9 . The yield of methyl benzenes is proportional to the time of contact with C within a 7-minute limit. The activation energy is 25 kJ./mol.; the methylation reaction is a reaction of second order. The maximum content of P_2O_5 in C is 60-70%; the effect of the

Card 2/3

Abstract: other component parts is insignificant. The C destivation, as a consequence of coke sedimentation causing the formation of gaseous products (H_2 , CO , CO_2 , saturated and unsaturated hydrocarbons), may be provoked by the addition of 5% water to the raw material. -- I. Matveyeva.

Card 3/3

7
Zinc-iron alloy contact catalysts in the reaction of dehydrogenation of cyclohexanol to cyclohexanone. 7 Relation between catalytic properties and their potentiometric characteristic. Edward Treszczanowicz, Barbara Lipka, and Andrzej Jurewicz. *Chem. Abstr.* 2, 319-25(1958). The effect of the compn. of Zn-Fe alloys and the effect of the structure of alloys of identical compn. but prepd. in different ways on their catalytic properties and the potentials of their powder electrodes were investigated.

M. Markiewicz

Distri: 4E3d

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USSR/Chemical Technology. Chemical Products and their Application.
Glass. Ceramics. Building Materials.

J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27595

Author : P.P. Budnikov, S.G. Tresvyatskiy.

Inst :

Title : Methods of High Temperature Thermal Analysis.

Orig Pub: Ogneupory, 1955, No 4, 166-173.

Abstract: The methods and equipment for the high temperature thermal analysis are described; they make the determination of the melting point of highly refractory oxides and their compounds up to 2200° possible. It is proposed to use a W-Mo thermocouple for temperature measurements and a Mo crucible in the shape of a plate for melting the substances. In order to protect the thermocouple and the plate from oxidation caused by the electric furnace provided with a heating tube of electrographite, N is let through at a speed of 20 to 30 lit per hour; the description of the furnace is given.

Card : 1/2

-56-

USSR/Chemical Technology. Chemical Products and their Application.
Glass. Ceramics. Building Materials.

J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27595

An electronic potentiometer EPP-09 is used to record the thermogram; heating and cooling are usually carried out at a speed of 80° per min.

Card : 2/2

-57-

Hydrogenation of Polish naphthalene, decahydronaph-
thalene. ~~Edward Trzcinski and Stanislaw Ciborow~~
~~Polish Chemical Society, Warszawa, Poland~~

TRESZCZANOWICZ, E.; SZNAJDER, J.

"Start of Production in an Experimental Installation for Synthesis of Acetone in the
Oswiecim Chemical Works." P. 106,
(CHEMIK, Vol. 7, No. 4, Apr. 1954, Katowice, Poland.)

SO: Monthly List of East European Accessions, (EMAL), LC, Vol. 3,
No. 12, Dec. 1954, Uncl.

TRESZCZANOWICZ, E.

Treszczanowicz, E.; Abramowicz, J.

"The share of Soviet scientists in the world's investigation of catalysis", p. 545
(Przemysl Chemiczny, Vol. 9, no. 11, Nov. 1953, Warszawa)

Vol. 3, No. 3

SO: Monthly List of East European Accessions, Library of Congress, March 1954, Uncl.

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSING AND PROPERTY INDEX																																																			
16																																																			
<p><i>Co</i></p> <p>Azeotropic method of dehydrating raw alcohol from yeast. S. Rakowski and E. Trzaskanowicz. <i>Przemysl Chem.</i> 21, 147-8(1937).—This method of dehydrating, with 50 parts of benzene and 50 parts of benzene, is at the same time a method of purification, since acetaldehyde, acids and esters are removed nearly completely, 73-8% of them passing with the light fraction, 15.5-25% with the azeotropic fraction, and only 2.8-7.3% remaining with the dehydrated alc. Amines, however, are equally distributed among all the fractions, and require a special process of treatment.</p> <p style="text-align: right;">A. C. Zachlin</p>																																																			
<p>ASH-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

1ST AND 2ND CROSS																										3RD AND 4TH CROSS																									
1ST AND 2ND CROSS																										3RD AND 4TH CROSS																									
<p> Azeotropic dehydration of alcohol, using dichloro- methane. S. Bakowski and H. Lisowski. <i>Przemysl Chem.</i> 22, 211-27 (1948); cf. C. A. 43, 3517. The soly. of H₂O in CH₂Cl₂ is 0.11% at 20°. 90.3-99.9% EtOH is obtained by azeotropic distn. of 93-99% rectified or crude spirit with CH₂Cl₂. B. C. P. A. </p>																																																			
<p> ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION </p>																																																			
<p> 1ST AND 2ND CROSS 3RD AND 4TH CROSS 5TH AND 6TH CROSS 7TH AND 8TH CROSS 9TH AND 10TH CROSS 11TH AND 12TH CROSS 13TH AND 14TH CROSS 15TH AND 16TH CROSS 17TH AND 18TH CROSS 19TH AND 20TH CROSS 21ST AND 22ND CROSS 23RD AND 24TH CROSS 25TH AND 26TH CROSS 27TH AND 28TH CROSS 29TH AND 30TH CROSS 31ST AND 32ND CROSS 33RD AND 34TH CROSS 35TH AND 36TH CROSS 37TH AND 38TH CROSS 39TH AND 40TH CROSS 41ST AND 42ND CROSS 43RD AND 44TH CROSS 45TH AND 46TH CROSS 47TH AND 48TH CROSS 49TH AND 50TH CROSS 51ST AND 52ND CROSS 53RD AND 54TH CROSS 55TH AND 56TH CROSS 57TH AND 58TH CROSS 59TH AND 60TH CROSS 61ST AND 62ND CROSS 63RD AND 64TH CROSS 65TH AND 66TH CROSS 67TH AND 68TH CROSS 69TH AND 70TH CROSS 71ST AND 72ND CROSS 73RD AND 74TH CROSS 75TH AND 76TH CROSS 77TH AND 78TH CROSS 79TH AND 80TH CROSS 81ST AND 82ND CROSS 83RD AND 84TH CROSS 85TH AND 86TH CROSS 87TH AND 88TH CROSS 89TH AND 90TH CROSS 91ST AND 92ND CROSS 93RD AND 94TH CROSS 95TH AND 96TH CROSS 97TH AND 98TH CROSS 99TH AND 100TH CROSS </p>																																																			

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																										MATERIALS INDEX																									
<p><i>Ca</i></p> <p>An azeotropic method of dehydration of alcohol by means of methylene chloride. II. Experiments on a semitechnical scale. S. Nakowski and E. Trexaczanowicz. <i>Przemysl Chem.</i> 22, 266-78(1938).^{225A} Semi-technical app. for dehydration of alc. by the new method (cf. <i>ibid.</i> 211-27) was constructed. Expts. performed with this app. showed that for attaining satisfactory dehydration a column having about 25 plates is sufficient. It is most appropriate to convey the whole dehydrating agent to the uppermost plate. The steam consumption amounts to about 130 kg. per hectoliter of alc. of 00.50°; with 02° alc. it amounts to 164 kg. per hectoliter. As raw material for the production of anhyd. alc., raw spirits can be used, contg. up to 1 g. AcH per l.; 75% of this aldehyde is removed in the course of the process. The strength of the alc. dehydrated by the new method is 90.0°. As far as the content of impurities and other properties are concerned, this product meets the requirements set for export alc.</p> <p>Edward A. Ackermann</p>																										<p><i>16</i></p>																									
A 58-35A METALLURGICAL LITERATURE CLASSIFICATION																										E 2-100000																									
100000 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100																										100000 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100																									

CA

30

Production of styrene. E. Trestezanowicz. *Przemysl Chem.* 5(28), 486-97(1940).—The methods of production of styrene used in Germany and other countries are reviewed and the possibility of replacing styrene by methylstyrene in the production of synthetic rubber is explored. 19 references.
Frank Gonet

CA 2

Catalysis in the Soviet Union. E. Treščanowicz. *Przemysł chem.* 27:or [N.S.] 4), 43-51(1948).—A review of the work of the Russians in the field of catalysis. 21 references. Frank Gouet

458.53.4 METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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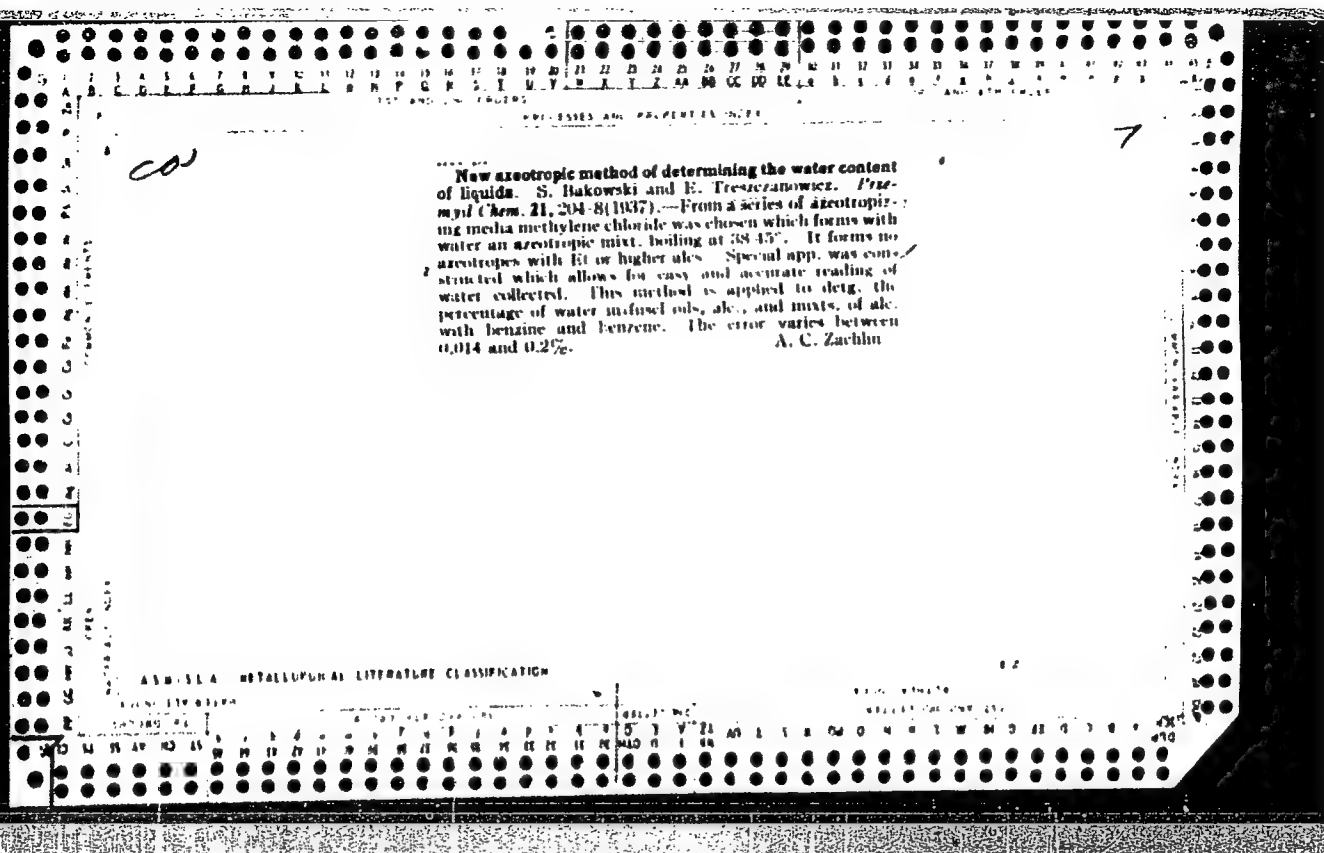
Purification and hydrogenation of naphthalene. E. Treszczanowicz and St. Cichorowski. *Przemysł Chem.* 6, 132-4(1959).—A method is given for the purification of $C_{10}H_8$ contg. 0.13-0.16% S with metallic Na, and its subsequent hydrogenation to tetrahydronaphthalene. The kinetics of the hydrogenation reaction in the presence of different catalysts (e.g., $CuO + Cr_2O_3$ on SiO_2 gel, or $Ni-Al_2O_3$) was investigated and the influence of the degree of purity of the $C_{10}H_8$ and H_2 , the temp. of the reaction, the H_2 pressure, and the quality, amt., and grain size of the catalyst on the hydrogenation reaction were examined.

Frank Gonet

CA

16

✓ Azotropic dehydration of alcohol. R. Treszczanowicz.
Przemysł Chemiczny, 6(29), 177-80(1980).--The consumption
of heat in the azotropic dehydration of alc. with MeCl
was 130 kg. of steam for each 100 l. of dehydrated alc. The



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

180 AND 4TH ORDERS

B-II-1

BC

Role of benzene as an anisotropic agent in the
dehydration of alcohol. S. Sosnowski and E.
T. Szwarc (Prismy Chem., 1936, 20, 68-75).
The composition and b.p. of anisotropic and hetero-
anisotropic mixtures of benzene (b.p. 100°), containing
66% of $n\text{-C}_6\text{H}_{14}$, EtOH , and H_2O have been deter-
mined. R. T.

COMMON ELEMENTS

COMMON VARIABLE MOIS

ASB-52A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBOL

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1ST AND 2ND CODES										3RD AND 4TH CODES									
PROCESSING AND PROPERTIES INDEX																			
<div style="float: left; width: 10%;">BC</div> <div style="float: right; width: 10%;">B-II-1</div> <div style="clear: both;"></div> <p style="text-align: center;"> Asotropic dehydration of alcohol, using methylene chloride. II. Semi-industrial-scale tests. S. BAKOWSKI and E. TARASZKOWICZ (Przemysl Chem., 1968, 22, 266-278; cf. B., 1939, 14).—99.9% EtOH is obtained by asotropic rectification with CH_2Cl_2 of 92% EtOH, containing >1 g. of MeCHO per l. With higher [MeCHO] the asetrope should be washed with H_2O. E. T. </p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
FROM SYNONYM										COLLISION									
SYNONYM										COLLISION									

1ST AND 2ND ORDERS																		3RD AND 4TH ORDERS																	
PROCESSES AND PROPERTIES INDEX																																			
BC																		B-11-1																	
<p>Anomalous behavior of water as liquid and liquids. The critical point of H₂O (Pressure = 218 atm; T_c = 374°C) is H₂O (Pressure = 218 atm; T_c = 374°C). The critical point of H₂O compared to other H₂O and H₂O-H₂O compounds is characterized by isotropic distillation from the mixture of the vol. of H₂O separating from the mixture.</p>																																			
ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION																																			
FROM SYSTEMLINE																		FROM SYSTEMLINE																	
LARGE GROUP																		SMALLER GROUP																	
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																		A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																	

CA

16

Production of butadiene. *Preparation of Butadiene*. *Praxair Chem. 27* (or [N.S.] 4), 14-18(1948). The various methods used to produce butadiene are described and compared. The Publisher Process is dealt with in detail.

Frank Conet

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

6-27-12-11

147089 *4

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
COMMON ELEMENTS																										METALLS																									
<p>176</p>																										<p>PROCESSES AND PROPERTIES - 101</p>																									
																										<p>Role of benzene as azeotropizing agent in the process of dehydration of alcohol. S. Sienkowski and E. Tieszenowicz. <i>Przemysl Chem.</i> 20, 60 75(1936). --Sp. gr., distn. curve (Engler), elementary compn., apparent mol. wt. and content of aromatic and unsatd. hydrocarbons, as well as of paraffins and naphthenes were detd. for benzene used in Poland for dehydration of alc. The compn. and b. p. of the "azeotrope" benzine-alc. and of the "heteroazeotrope" benzine-alc.-water were detd. The main constituent of the benzene used is <i>heptane</i>, which accounts for 60% of the mixt. of hydrocarbons. The b. p. of "azeotrope" 52.0% (by vol.) benzene and 47.4% alc. is on the av. 72.6°, while the b. p. of the "heteroazeotrope" consisting of 64% (by vol.) benzene, 5% H₂O and 31% alc. is 60.7°</p> <p>A. C. Zashin</p>																									
<p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																										<p>11-10-1936</p>																									
<p>11-10-1936</p>																										<p>11-10-1936</p>																									

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCESSING AND PROPERTY INDEX																			
Bc										B-II-1									
<p>Degeneration of alcohol of high acetaldehyde content by an anisotropic method. B. Baniowski, E. Tarnacki, and J. Dolowinski (Prace Inst. Chem., 1936, 20, 195-206). Most of the MeCHO present in potato spirit is removed with the first fractions obtained by anisotropic distillation with 1:1 C₂H₅-benzene, when the succeeding fractions yield abs. EtOH. The benzene should have b.p. 100-105° and should not contain FALs. B. T.</p>																			
ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PREPARATION INDEX																																																			
<p>Dehydration of alcohol of high acetaldehyde content by an azeotropic method. S. Dulowski, K. Trzaskanowicz and J. Dulowski. <i>Przemysl Chem.</i> 20, 103-106 (1938). Most of the MeCHO present in potato spirit is removed with the first fractions obtained by azeotropic distn. with 1:1 C₆H₆-benzene, when the succeeding fractions yield abs. EtOH. The benzene should b. 100-102°, and should not contain PhMe. H. C. A.</p>																																																			
<p>ASTM 354 METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

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2.

Role of benzene as azeotropizing agent in the process of dehydration of alcohol. S. Sosnowski and E. Trzcianowski. *Przemysł Chem.* 20, 69-75 (1934).—Sp. gr., distrib. curve (Bogler), elementary compn., apparent mol. wt. and content of aromatic and unsatd. hydrocarbons, as well as of paraffins and naphthenes were detd. for benzene used in Poland for dehydration of alc. The compn. and b. p. of the "azeotrope" benzine-alc. and of the "heteroazeotrope" benzine-alc.-water were detd. The main constituent of the benzine used is *n*-hexane, which accounts for 60% of the mixt. of hydrocarbons. The b. p. of "azeotrope" 82.6° (by vol.) benzine and 47.4° alc. is on the av. 72.6°, while the b. p. of the "heteroazeotrope" consisting of 64% (by vol.) benzine, 5% H₂O and 31% alc. is 69.7°.

A. C. Zachlin

A. C. Zachlin

ASAC-54 METALLURGICAL LITERATURE CLASSIFICATION

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501.01 4.9 607 301

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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCEDURES AND OPERATIVE INDEX																			
3C										B-3-1									
<p>Asotropic dehydration of crude alcohol from pressed yeast manufacture. S. BAKOWSKI and E. TRZECIANKOWICZ (Przemysl Chem., 1937, 21, 147--148).--The crude spirit is subjected to azeotropic dehydration (with C_2H_5 and benzene), when 99.71% EtOH containing MeCHO 0.04, acids 0.0045, and amines 0.0007% is obtained, the bulk of the MeCHO, AcOH, and EtOAc being eliminated in the pre-distillate. The process does not give satisfactory separation of amines. R. T.</p>																			
<p>ASAC-55A METALLURGICAL LITERATURE CLASSIFICATION</p>																			
FROM SYNDICATE										FROM DONOR									
<p>SYNDICATE</p>										<p>SYNDICATE</p>									

B-1-1

Asotropic determination of the water content of liquids. S. BAKOWSKI and E. TARSZANOWICZ (Przemysl Chem., 1937, 24, 304-308) $\text{=CH}_2\text{Cl}_2$ yields an asotropic mixture with H_2O , b.p. 34-45° but not with alcohols. The H_2O content of fuel oil, kq. NaOH , and motor fuels containing NaOH is determined by asotropic distillation with CH_2Cl_2 , measuring the vol. of H_2O separating from the condensed asotropic. R. T.

Handwritten: *CA*

PROCESS AND PROPERTIES INDEX

Butadiene from petroleum. Edward Treszczanowicz.
Przemysl Chem. 4, 301-401 (1918); cf. C.I. 42, 4517d.
A review. Frank Goulet

COMMON ELEMENTS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

6-27 11 1971

6124 004679

6124 004679

TRESZCZANOWICZ, E.

The Study of Alloy Zinc-Iron Catalysts in Reaction of Dehydrogenation of Cyclohexanone, Part I by E. TRESZCZANOWICZ, Page 445, Przemysl Chemiczny, No. 8, 1957.

TRESCZANOWICZ, E.

POLAND/Chemical Technology. Chemical Products and Their Uses. Part III. Industrial Organic Synthesis. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 51190

Author : Leszczynski, Z., Treszczanowicz, E.

Inst : -

Title : Synthesis of Phenol and Acetone from Isopropyl Benzene. I. Preliminary Evaluation of the Method of Phenol Production and the Possibility of Its Application by the National Industry.

Orig Pub : Przem. chem., 1957, 13, No 11, 664-668

Abstract : A semi-commercial technique for the production of phenol by propylene alkylation of C_6H_6 , oxidation of the resulting cumene to a hydroperoxide and decomposition

Card : 1/2

POLAND/Chemical Technology. Chemical Products and
Their Uses. Part III. Industrial Organic
Synthesis.

H

Abs Jour : Ref Zhur-Khimiya, No 15, 1953, 51190

of the latter by an ion exchange resin
(Vofatit P) was described. The yield of
phenol, based on C_6H_6 was 85 percent.
Economic factors of the process in the
conditions of PPR as well as process
flowsheet were presented. -- T. Ambrush

Card : 2/2

TRESZCZANOWICZ, E.

Acetone from Acetylene and Water, Part II by K. MARCZEWSKA, H. STEINER,
J. MUSIEROWICZ and E. TRESZCZANOWICZ, Page 463, Przemysl Chemiczny, No. 8, 1957.

TRESZCZANOWICZ, E.

Treszczanowicz E.

Treszczanowicz E. "Purification and Hydrogenation of Naphthalene to Tetralin."
(Oczyszczanie i uwodornianie naftalenu do tetraliny). Przemysl Chemiczny,
No 2-3, 1950, pp. 132-134, 4 tabs.

A method has been elaborated for purification of naphthalene by way of heating with fused sodium. The hydrogenation process was observed in a rotating autoclave in the presence of two different catalysts. The influence of various factors, such as: the degree of hydrogen and naphthalene purity, the temperature of the reaction, the pressure, the quality of the catalyst and its amount and size of grain were examined with regard to the above process.

SO: Polish Technical Abstracts - No. 2, 1951

"APPROVED FOR RELEASE: 03/20/2001

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TRESZCZANOWICZ, E.

Poland/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis, I-14

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62698

Author: Treszczanowicz, E., Jaworski, I., Kazmierowicz, W.

Institution: None

Title: Synthesis of Ethylamines from Acetaldehyde, Hydrogen and Ammonia in the Presence of a New Dehydration-Hydrogenation Catalyst

Original

Periodical: Synteza etyloamin z aldehydu octowego wodoru i amoniaku w obecności nowego kontaktu dehydratacyjno-uwodorniającego, Przem. chem., 1955, 11, No 1, 36-39; Polish; Russian and English resúmes

Abstract: Comparative investigations were carried out of the synthesis of ethyl amines (I) in an experimental unit in the presence of 2 different catalysts (C). The old catalyst (OC) containing 7.9% Ni, 2.1% Cr_2O_3 , and 90% pumice had strong hydrogenating and weak dehydrating properties. The new catalyst (NC) containing 4.9% Ni and 51% Al_2O_3 had strong hydrogenating and dehydrating properties. The

Card 1/3

Poland/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis, I-14

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62698

Abstract: experiments were conducted in a reactor 1,000 mm high, 350 x 35 mm wide (cross section of the reactor had the shape of an oblate ellipse). Temperature distribution within reactor: bottom 134-135°, middle 152-162°, top 163-175°. Feed: H_2 400 l/hour, CH_3CHO 400 l/hour, NH_3 200 l/hour, circulating gases 4,000 l/hour. Contact time 2.4 seconds. In presence of NC crude product contained more diethyl amine (II) which is the main product aimed at, than with OC under identical conditions. With all other conditions being equal there is observed a large difference in the content of II in the product obtained with fresh C (22.3%) and C in operation for 10 days (28.8%). Changes in composition of the products are due to different mechanism of the process in presence of fresh C and C in operation for a long time. This is confirmed by the fact that on using NC there was obtained immediately (under identical conditions) products containing 28.6% II. After one month of operation the reaction product obtained with OC contained 58.7% I including 26.3% II, with NC it contained 64.5% I including 35.1% II, aldehyde admixtures were 0.5% and 0.1% respectively. An advantage of NC is also its stability to overheating

Card 2/3

Poland/Chemical Technology - Chemical Products and Their Application. Industrial
Organic Synthesis, I-14

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62698

Abstract: and enhanced mechanical strength (after one month of operation OC
had ~30% of its bulk reduced to small particles, NC ~0.5%). A
diagram of the unit is given.

Card 3/3

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APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R001756530001-3"

LESZCZYŃSKA, H., LESZCZYŃSKI, ZB., TRESCZANOWICZ, E.

Poland/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis, I-14

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62702

Author: Leszczynska, H., Leszczynski, Zb., Treszczanowicz, E.

Institution: None

Title: Evaluation of MgO-SiO_2 Catalysts for the Synthesis of Butadiene from Ethyl Alcohol, on the Basis of Their Behavior on Oxidation of Indigocarmine

Original

Periodical: Ocena kontaktow MgO-SiO_2 do syntezy butadienu z alkoholu etylowego na podstawie zachowania sie w reakcji peroksydacyjnego utleniania indygokarminu, Przem. chem., 1955, 11, No 1, 45-47; Polish; Russian and English resumes

Abstract: There has been ascertained a correlation between the activity of MgO-SiO_2 catalyst in the synthesis of butadiene from ethyl alcohol and its activity in the reaction of oxidation of indigocarmine (I)
[Determination procedure see Krause, Przem. chem., 1950, 6 (29), 377].

Card 1/2

Poland/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis, I-14

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62702

Abstract: With the Polish catalyst (PC) containing 70.1% MgO and 29.9% SiO₂ specific active surface 1.0, complete decolorization of I is attained after 13 minutes, with a foreign catalyst (FC) containing 60.0% MgO and 40.0% SiO₂ specific active surface following activation 1.0, complete decolorization of I was attained after 15 minutes. After activation at 480°, time of decolorization of I with PC and FC rose to 28 minutes, on heating PC and FC at 700° for 6 hours, time of decolorization of I with PC rose to 77 minutes, with FC to 57 minutes. Roentgenograms of PC and FC are similar to each other. FC has about the same activity as the PC but is less sensitive to overheating. It is proposed to utilize the method of determining the time of complete decolorization of I as a rapid method of control of the activity of the catalyst during its preparation, activation, operation and regeneration.

Card 2/2

TRESZANOWICZ, E.

Chem 2

Polish Technical Abst. 2438 ✓

542.941:8542.973:547.593:669.018.7

No. 4, 1953

Chemistry and Chemical
Technology

Treszanowicz, E. Research over Ferro-Zinc Catalysis
in the Cyclohexanol Dehydrogenation Process.

Badania nad kontaktami cynkowo żelazowymi w reakcji
odwodorniania cykloheksanolu. (prace Gl. Inst.
Chem. Przem. No. 4), Warszawa, 1952, PWT, 50.5 pp.,
38 figs., 35 tabs.

Investigation of the influence on cyclohexanol
dehydrogenation of the iron content in ferro-zinc
alloys. Investigation of the catalytic properties
of the components, and of impurities (oxide),
likely to occur in the course of preparation of the
alloy, or in the event of the alloy working under
unsuitable conditions. Determination of the kinetics
of the dehydrogenation process in the presence of
two alloy catalysis containing only 12.5 percent
and 18.6 per cent iron and of zinc respectively.
Velocity and activation energy constants of
cyclohexanol dehydrogenation in the presence of these
catalysts have also been fixed. The research carried
out over alloy catalysts has made it possible to
advance a conception for the preparation of mixed
catalysts by means of electrolytic separation from

OVER

Distr: 4E2c(j)/4E3d

7 Catalytic oxidation with air of a mixture of 3- and 4-
picoline in presence of ammonia. Barbara Lipka, Edward
Treszczanowicz, Irena Jaworska, and Andrzej Jurewicz
(Inst. Chem. Ogólny, Warsaw). *Przemysł Chem.* 37, 484-9
(1958) (English summary).—Oxidation of the mixt. pico-
lines (I) with air in the presence of NH_3 over a supported on
 Al_2O_3 vanadium oxide catalyst gave nicotinic and isonico-
tinic acid nitriles. The oxidation was carried out in the gas
phase. The yield of nitriles at 330–380° was approx. 63%
of the I introduced into the reactor; however, calculated
on the I that has reacted 90% was oxidized to nitriles) and
only 6.6% underwent destructive oxidation. F. J. H.

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Distr: 4E2c(j)/4E3d

Problems in the Polish production of chlorine derivatives of methane. Edward Treszczanowicz (Inst. Chem. Ogólnej, Warsaw). *Przemysł Chem.* 37, 451-3 (1958).—A flow-sheet is presented for the production of MeCl , CH_3Cl , and CHCl_3 . The natural gas contains 0.6% of O and up to 0.4% of C_2H_4 (I) and higher hydrocarbons. This gas is passed with 3 stoichiometric addn. of H through a reactor filled with Ni catalyst at 300-350°. O is used up in the lower part of the reactor and I is cracked in the higher part. The gas is further passed at 320-350° through a Ni catalyst supported on Al_2O_3 . The gas purified by the above method is cooled and then chlorinated. The method is based on the paper by Stegner, *et al.* (C.A. 53, 2068A), BIOS 831, F.I.A.T. 1299, and BIOS 1662.

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9/1 J.J.

P/014/60/039/003/002/005
A221/A126

AUTHOR: Treszczanowicz, Edward

TITLE: Production of therephthalic acid and the possibilities of its starting in Poland

PERIODICAL: Przemysł Chemiczny, v. 39, no. 3, 1960, 137 - 141

TEXT: Production of therephthalic acid, an intermediate in the manufacturing process of a wool-like polyester fiber is of great importance for the Polish national economy. This synthetic fiber is known in England under the trade name of "Terylene", and its properties are well known. Basic raw material for its production in USSR, UK and USA is paraxylene, obtained as a mixture with other xylenes etc. during the reforming of naphtha. In Poland it is obtained as a by-product from the coke industry. Metaxylene, too, is gaining importance as material for the production of isophthalic acid, isophthalates (plasticisers), polyester resins and fibers. In view of the importance of paraxylene, methods were worked out to increase its yield and to transform metaxylene into paraxylene by means of a catalytic isomerization process. Rapidly growing production of Terylene has led to the development of other methods of xylene synthesis. One is

Card 1/3

P/014/60/039/003/002/005

Production of terephthalic acid and the possibilities .. A221/A126

based on catalytic dealkylation of polymethyl-benzenes. Another method worked out and patented by Instytut Chemii Ogólnej (Institute of General Chemistry) in Warsaw (Ref. 22: E. Treszczanowicz, W. Celler, M. Popowicz, K. Balcerzak, Pat. PRL 39802 (1955); 4200 (1957)), is based on gas phase alkylation of toluene with methanol. In synthetic mixtures of xylenes, the yield of paraxylene is about 25 - 28%. Synthetic xylenes are free from ethylbenzene and other impurities, an advantage in case a direct method for oxidation of the mixture of all three xylenes into phthalic acids should be introduced. Further, the author discusses the methods of terephthalic acid production by a) oxidation of paraxylene in the liquid phase by nitric acid and oxygen or air, b) oxidation of a mixture of xylenes to a mixture of phthalic acids, c) isomerization of potassium ophthalate in CO₂ over catalyst to the K salt of terephthalic acid, d) disproportionation of benzoic acid to terephthalic acid and benzene, e) oxidation of paradiisopropylbenzene. There are also several other methods, but they have not been tried out on an industrial scale. In the final part of this article, the author discusses the total Polish requirement of xylenes for 1965, estimated at 27,500 t, 13,700 t of which would be for production of wool-like fibers. This amount will be made up of 4,000t from coke production, 2,000 t from crude oil processing, and 7,700 t by synthesis. There are 39 references: 20 Soviet-bloc and 19 non-Soviet-bloc. The

Card 2/3

Production of therephthalic acid and the possibilities... A221/A126 P/014/60/039/003/002/005

referencesto the English-language publications read as follows: (Ref. 4: Chem. Ind., 10, 414, (1958)); (Ref. 5: Chem. Ind., 10, 612 (1958)); (Ref. 33: Chem. Trade J., 145, 1487 (1959)); (Ref. 37: Chem. Trade J., 145, 33 (1959)).

ASSOCIATION: Zakład Syntezy Kontaktowej Instytutu Chemii Ogólnej (Institute of General Chemistry, Department for Catalytic Synthesis, Warsaw)

Card 3/3

TRETCHEV, G. G.

FA 5T13

USSR/Boilers

Apr 1947

"The Flow Resistance of a Steam-water Mixture through a Heated Boiler Tube at High Pressure," A. A. Armand and G. G. Tretchev, 5 pp

"Izv Teplotekh Inst" Vol XVI, No 4

Results of an investigation of flow resistance of a steam-water mixture in a horizontal tube 56/70 mm in diameter at various pressures. On the basis of experiments of the VTI and TsKTI with a horizontal tube 25.5 mm in diameter, formulae are deduced to calculate resistance for pressures, from 10 to 180 atmospheres. Fully illustrated with graphs, diagrams, and formulae.

ANTONOV, V.; TREtenko, A.; SOROKINA, G.

The unyielding. Izobr. i rats. no. 5:24-25 My '61. (MIRA 14:5)

1. Reydivaya brigada zhurnala "Izobretatel' i ratsionalizator."
2. Predsedatel' respublikanskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, g. Alma-Ata (for Antonov).
3. Zaveduyushchiy promyshlennym otdelom Gorkoma Kommunisticheskoy partii Kazakhstana, g. Alma-Ata (for Tretenko).
4. Spetsial'nyy korrespondent zhurnala "Izobretatel' i ratsionalizator", g. Alma-Ata (for Sorokina).
(Kazakhstan—Technological innovations)

AUTHOR David Kaplan, W. L. Trefler, M. J.

1. The first part of the paper is devoted to a discussion of the

theoretical background of the problem. It is shown that the

problem is equivalent to a problem in the theory of

the theory of the theory of the theory of the theory of the

Card 1/2